

ON A COLLECTION OF BATRACHIANS AND REPTILES FROM
MOUNT ORIZABA, MEXICO, WITH DESCRIPTIONS OF TWO NEW
SPECIES.

BY
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While a member of the Scoville expedition to Mount Orizaba, Mex., in the summer of 1891, the writer made a small collection of batrachians and reptiles, which furnishes the basis of the present paper.

The collection was made about the city of Orizaba at a height of 4,000 feet above sea level, and on the southwestern slope of the mountain between the heights of 8,000 and 14,000 feet.

No special effort was made to secure specimens of either class, only such being taken as came readily to hand while collecting insects. The collection is not to be viewed, therefore, as a representative one for the localities mentioned.

My thanks are due to Dr. O. P. Hay, of Irvington, Ind., for the loan of books and other aids, and to Mr. Leonhard Stejneger, of the U. S. National Museum, for the loan of specimens for comparison. The types of the new species have been deposited in the U. S. National Museum.

BATRACHIA.

URODELA.

PLETHODONTIDAE.

SPELERPES Rafinesque, 1832.

Spelerpes bellii Gray.

"Cat. Brit. Mus., 1846, 46," Boulenger, Cat. Batrach. Grad. Brit. Mus., 1882, 68.
Cope, Batrach. N. A., 1889, 161.

This was the most common salamander on the slope of the mountain, numerous specimens having been taken from 8,000 to 14,000 feet, at which latter height it was frequent beneath stones and the bark of logs. At 12,000 feet three specimens were taken which were uniform plumbeous above, the series of yellow spots usually present being wholly obsolete. These were the largest specimens secured and measured respectively 146, 153, and 167^{mm} in total length. Among the others the young had the series of spots most distinct, but in all the spots in life were yellow, not red, as stated by both Boulenger and Cope.

U. S. National Museum, Nos. 19263-19265.

Spelerpes orizabensis, sp. nov.

Palatine teeth, separated from parasphenoids by a wide interspace; extending externally beyond the nares. Parasphenoid patches separated, scarcely diverging posteriorly. Head long and narrow, but little wider than body; greatest width, which is at angle of jaws, contained one and three-fourth times in distance from snout to gular fold. Snout short and blunt; nostrils and eyes small. Body cylindrical, elongate, measuring from three to three and a half times the distance from snout to gular fold.* Limbs weak, the digits slender and margined, but not webbed at base. Tail cylindrical, tapering gradually to a point, slightly restricted at base, a little shorter than head and body. Gular fold distinct; twelve costal grooves.

General color, after immersion in alcohol, plumbeous; the body with a broad reddish-brown dorsal stripe which is blotched here and there with small dark spots and margined below by a band of gray which extends from angle of jaw to base of tail and is broken into patches by the black costal grooves.

In life, the dorsal stripe was a bright red and unbroken, very similar to but brighter than that of *Plethodon cinereus erythronotus* Green. In alcoholic specimens the darker blotches appear.

Measurements: Total length, 96^{mm}; snout to cloaca, 50^{mm}; snout to gular fold, 12^{mm}; width of head, 7^{mm}; length of fore limb, 11^{mm}; of hind limb, 12.5^{mm}; of tail, 46^{mm}; distance from axil to groin, 32^{mm}.

S. orizabensis differs from *S. leprosus* Cope in possessing a notably longer and narrower head; a blunter snout; a much less divergence of the parasphenoid patches; a more elongate body, the distance from axil to groin being exactly one-third the total length, whereas in *leprosus* it is very slightly more than one-fourth; a shorter tail; more slender and less depressed digits, and in color.

Three specimens were taken from between the bark and wood of a large spruce log, at the height of 11,000 feet on the slope of Mt. Orizaba.

U. S. National Museum, Nos. 19266-19267.

Through the kindness of Mr. Leonhard Stejneger, a bottle containing five specimens of *Spelerpes*, belonging to the U. S. National Museum, and taken at Orizaba by Prof. Sumichrast, was forwarded to me for comparison. In a letter accompanying the specimens Mr. Stejneger expressed the opinion that one of them was an undescribed species. This, after a careful examination, I find to be the case, and, with the consent of Mr. Stejneger, the following description is herewith inserted:

Spelerpes gibbicaudus, sp. nov.

Palatine teeth in two nearly straight series, extending externally beyond the nares; separated from the parasphenoids by a well-marked interspace. Parasphenoid patches long, separate, diverging

*The extreme length of head renders this proportion comparatively small.

but slightly posteriorly. Head narrow, but little wider than body, not depressed; greatest width contained one and a half times in distance from snout to gular fold. Body cylindrical, elongate, measuring over three and one-half times the distance from snout to gular fold. Fingers and toes short, not webbed at base. Tail cylindrical, shorter than head and body, and of almost the same diameter of body for three-fourths of its length, then tapering rapidly to a blunt point. Skin not wrinkled, but very closely pitted, the pits, beneath the lens, resembling circular scales. Gular fold distinct. Twelve costal grooves. Color uniform brown; the center of the dermal pits on dorsal surface of body and ventral surface of tail yellow, giving those regions the appearance of having been sprinkled with yellow dust. This appearance may be due to the action of alcohol.

Measurements: Total length, 85^{mm}; snout to cloaca, 46^{mm}; snout to gular fold, 10^{mm}; width of head, 6 $\frac{2}{3}$ ^{mm}; length of fore limb, 10^{mm}; of hind limb, 11^{mm}; of tail, 39^{mm}; distance from axil to groin, 31^{mm}.

From *S. leprosus* Cope, this species may be known by the straighter palatine teeth; the less divergence of the parasphenoids; the narrower head; the proportionally more elongate body; the unwebbed toes, and the shorter and much stouter tail.

One specimen, U. S. National Museum, No. 19255, collected at Orizaba, Mexico, by Prof. Sumichrast.

ANURA.

BUFONIDÆ.

BUFO Laurenti, 1768.

Bufo intermedius Günther.

Boulenger, Cat. Batr. Sal. Brit. Mus., 1882, 307.

A single specimen of *Bufo*, taken from the gutter in a street of the city of Orizaba, varies from the description given by Boulenger, loc. cit., as follows: The hind limb is longer, as, being carried forward along the body, the tarso-metatarsal articulation reaches the anterior border of orbit, instead of "to the eye." The color of *intermedius* is given as "olive above, with irregular, sometimes confluent, dark spots; belly immaculate or with slight spots." The specimen in hand is dark olive above, with a narrow ash gray (white in life), dorsal line extending from snout to anus. On top of the head this line widens, forming an ashen cross-band which extends across the anterior half of eyelids and the intervening frontal space. Sides and belly white with numerous small dark spots. Limbs with many large olive spots; front ones immaculate beneath. Length, 42^{mm}.

U. S. National Museum, No. 19268.

HYLIDÆ.

HYLA Laurenti, 1768.**Hyla eximia** Baird.

U. S. and Mex. Bound. Surv., II, 29; Pl. XXXVIII, Figs. 8-10. Boulenger, Cat. Batr. Sal. Brit. Mus., 1882, 378.

Several specimens of this handsome tree frog were secured from the leaves of bushes in the gardens about Orizaba. When on the leaves the general color was a bright pea green, instead of olive as given in the descriptions, loc. cit.

Hyla miotympanum Cope.

Proc. Acad. Phil., 1863, 47." Boulenger, Cat. Batr. Sal. Brit. Mus., 1882, 400.

This species was quite common about the city of Orizaba, on tall grass and the leaves of shrubs. One specimen was also taken at a height of 8,000 feet, near San Andres.

REPTILIA.

LACERTILIA.

IGUANIDÆ.

SCELOPORUS Wiegmann, 1828.**Sceloporus variabilis** Wiegmann.

Herp. Mex., 1834, 51. Boulenger, Cat. Liz. Brit. Mus., II, 236.

Frequent at Orizaba and as high as 14,000 feet on the mountain. About the city it was most often seen on the stone walls surrounding the gardens, especially in the suburbs. A single specimen, a ♂ measuring 146^{mm} in length, was secured there, and three others on the mountain slope, all of which were smaller.

Sceloporus æneus Wiegmann.

Herp. Mex., 1834, 52. Boulenger, Cat. Liz. Brit. Mus., II, 233.

Three specimens of this lizard, two ♂ ♂ and a ♀, were taken from the slope of the mountains at a height of 12,000 feet, and another, a ♂, at a height of 14,000 feet. Others were seen, but could not be captured, on account of their swiftness.

Measurements—adult ♂ :

	Millimeters.
Total length.....	91
Length of head.....	11
Length of body.....	35
Length of tail.....	45

In the field it is difficult to separate *æneus* from *variabilis*, as from above they are quite similar in appearance. When captured, however,

the larger size of the lateral scales, the greater prominence of the femoral pores, and the brilliant blue mottlings on the ventral surface of the ♂ of *aneus* easily distinguish them. Moreover, *aneus*, when full grown, is a smaller species than *variabilis*.

Sceloporus microlepidotus Wiegmann.

Herp. Mex., 1834, 51. Boulenger, Cat. Liz. Brit. Mus., II, 232.

The small-scaled lizard was the most abundant species on the slope of the mountain from 9,000 to 14,000 feet. They were continually seen along the pathway, and when pursued took refuge beneath fallen rocks or in the clumps of dense bunch grass. One was surprised at a height of 14,000 feet, with a half-eaten beetle, a species of *Lachnosterna*, in his mouth, and was chased quite a distance before he dropped his prey.

The species is at once known by the small size of the dorsal scales, there being on an average about seventy-five between the occipital plate and the base of tail. Four males, five females.

PHRYNOSOMA Wiegmann, 1828.

Phrynosoma orbiculare Wiegmann.

Herp. Mex., 1834, 53. Girard, Stansb. Rep. Grt. Salt Lake, 1852, 359. Boulenger, Cat. Liz. Brit. Mus., II, 241.

This, the only species of "horned toad" taken, was common in the fields about San Andres, between 7,500 and 9,000 feet, but was seen at no other locality. Those secured evidently belong to the variety *Cortezii* Bocourt, as the occipital spines are shorter than the longest temporal ones and the head is broader than long.

Measurements—adult ♀ :

	Millimeters.
Total length.....	131
Length of head.....	19
Width of head.....	24
Length of body.....	69
Length of tail.....	43
Length of fore limb.....	34
Length of hind limb.....	42

ANGUIDÆ.

GERRHONOTUS Wiegmann, 1828.

Gerrhonotus imbricatus Wiegmann.

Herp. Mex., 1834, Pl. x, Figs. 2, 5. Boulenger, Cat. Liz. Brit. Mus., II, 272.

A single specimen of this genus was captured on the slope of the mountain at a height of 11,000 feet. It was creeping slowly through the bunch grass, which, at that height, covered the soil, and when discovered made but little effort to escape, but darted forth its tongue rapidly after the manner of a snake.

The ventral scales are in twelve longitudinal series; but in the outer row on both sides several scales have been divided, giving thirteen to fourteen scales in some of the transverse series. The fore limb, when oppressed, reaches the posterior instead of anterior corner of eye; otherwise it agrees fully with the description cited.

Measurements: Total length (tail defective), 216^{mm}; length of head, 29^{mm}; of body, 94^{mm}; of tail (reproduced), 93^{mm}; of fore limb, 27^{mm}; of hind limb, 35^{mm}.

U. S. National Museum, No. 19262.

HIGH SCHOOL BIOLOGICAL LABORATORY,

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